Hemolytic Uremic Syndrome (HUS) Fact Sheet

What is Hemolytic Uremic Syndrome (HUS)?

HUS is a serious disease that affects the kidneys and blood clotting system. It usually occurs after a person has had a diarrheal illness caused by a toxin-producing bacterium. Most cases of HUS occur as a rare complication of infection with the bacterium called *E. coli* O157:H7. *E. coli* infections occur after eating contaminated food, such as undercooked meat, drinking unpasteurized juices or dairy products, or being in contact with cattle and other farm animals or with a person who has the infection. *E. coli* bacteria release a toxin that can damage the kidneys and blood clotting system. This can cause the sudden development of kidney failure, and damage to other organs.

Who gets HUS?

Anyone can get HUS. HUS is a rare disease but is more common in children than adults, especially those children less than five years of age. HUS is the leading cause of acute kidney failure in children. About 200-300 cases of HUS are reported in the United States each year.

How is HUS spread?

HUS is not spread from person to person. Please refer to the *E. coli* fact sheet for information about the spread of these bacteria.

What are the symptoms of HUS?

HUS can be mild or severe. Early clinical signs of HUS include decreased urine output, diarrhea and lethargy. Anemia, low platelet count and decreased kidney function, as revealed by laboratory testing, may follow. Fever and neurologic abnormalities (e.g., drowsiness, unconsciousness, and seizures) are also common among patients with HUS.

How soon after exposure do symptoms appear?

HUS usually develops one to two weeks after initial symptoms of *E. coli* infection (or infection with other bacteria that release similar toxins) appear. Please refer to the *E. coli* fact sheet for information about the time between exposure to these bacteria and symptom onset.

How is HUS diagnosed?

There is no single laboratory test for HUS. A person with HUS will usually have a history of diarrhea for a few days, with development of bloody diarrhea, anemia and kidney failure. If a doctor suspects HUS based on a patient's symptoms, he/she will request several laboratory tests to evaluate kidney function, red blood cell count and blood or protein in the urine. Stool cultures will also be obtained to determine whether *E. coli* O157:H7 or another toxin-producing bacterium is present. The combination of clinical signs and symptoms and the laboratory results help a doctor determine the diagnosis of HUS.

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What is the treatment for HUS?

Treatment for HUS is mostly supportive. The patient may require intravenous fluids. Blood transfusions may be given if the patient is severely anemic. Dialysis may be required if the patient develops kidney failure. Antibiotics are usually not used because they may make the symptoms worse. Most patients with HUS recover completely and kidney function returns to normal if they are treated quickly and properly.

How can HUS be prevented?

Preventing infection by bacteria, especially *E. coli* O157:H7, is key to preventing HUS. The following measures can help prevent infection with *E. coli* O157:H7. Handle meat carefully. Use separate cutting boards for raw meats, and wash counters and cooking tools thoroughly after preparing raw meat. Wash hands thoroughly after handling raw meat. Cook meat thoroughly. Avoid eating raw or undercooked meat, particularly ground beef. Do not drink unpasteurized (raw) milk or fruit or vegetable juices.

Supervise children when visiting farms and petting zoos. Wash hands after touching animals, fences, and other surfaces that may be contaminated by animal manure. Do not eat or drink in areas where animals are housed. Always carefully wash hands after bowel movements, diapering children, caring for persons with diarrhea, or contact with cattle and manure. Wash hands before preparing food, eating, and feeding children. Teach children proper handwashing habits. Food service workers and young children known to have *E. coli* O157:H7 infection may be required to stay home from work or daycare/school until two stool cultures have tested negative for the bacteria to decrease the risk of transmission from person to person.

What should I do if I think I or a family member might have an infection with *E. coli* O157:H7 or something similar?

The sick person should seek medical care as soon as possible. If infection from contaminated food or water or from exposure at a petting zoo or other public venue is suspected, a family member or the healthcare provider should call the local health department as soon as possible.

How can I get more information about HUS?

- If you have concerns about HUS, contact your healthcare provider.
- Call your local health department. A directory of local health departments is located at http://www.vdh.virginia.gov/local-health-districts/.
- Visit the Centers for Disease Control and Prevention website at http://www.cdc.gov/hantavirus/.

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